

Appl. No. 09/215,781
Amdt. Dated June 24, 2004
Reply to Office Action of April 20, 2004

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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

1 – 18 (cancelled)

19. (currently amended) The combination according to claim 35 48, wherein said pressing device comprises a slide ~~engaging said pressure device and~~ disposed proximate to said advancing device and the circular blade, and further comprises a second pneumatic drive for actuating said slide.

20. (currently amended) The combination according to claim 19, wherein said slide embraces externally the blade head housing ~~and is guided at the exterior side of said blade head housing.~~

21. (previously presented) The combination according to claim 19, wherein said slide has a projection radially extending into said blade head housing, wherein said projection engages said pressure device positioned in a recess of said blade head housing.

22. – 34. (cancelled)

35. (currently amended) In combination, a circular blade and a blade holder for cutting machines, comprising:

a blade head secured to a lowering device and comprising a blade head housing having a chamber;

said blade head further including having a blade holding member;

a said circular blade being retained in by said blade holding member;

an advancing device mounted in said blade head housing;

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said advancing device comprising an advancing piston rod and an advancing piston actuating said advancing piston rod;

a biasing component acting on said advancing piston rod to press said advancing piston rod in a ready position of the circular blade;

said advancing piston rod acting on said blade holding member for moving the circular blade from a ready position into a cutting position, thereby overcoming the force of a said biasing component acting on said advancing piston rod to press said advancing piston rod in the ready position of the circular blade;

said advancing piston actuated by a first pneumatic drive and mounted and guided in said chamber;

said biasing component including a return spring and being mounted within said chamber, said biasing component having one end supported against said advancing piston and another end supported against a support structure within said chamber at an axial spacing from said advancing piston with the axial spacing between said advancing piston and said support structure within said chamber being such that said biasing component is in a ready position compression when said one end of said biasing component is supported against said advancing piston and said another end of said biasing component is supported against said support structure within said chamber; and

a pressing device for increasing the compression of said biasing component beyond said ready position compression of said biasing component by loading said biasing component toward said support structure within said chamber while said axial spacing between said advancing piston and said support structure within said chamber remains constant, whereupon said one end of said biasing component

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previously supported against said advancing piston is decoupled from and is no longer supported against said advancing piston.

36. (currently amended) In combination, a circular blade and a blade holder for cutting machines, comprising:

a blade head secured to a lowering device and comprising a blade head housing having a chamber;

said blade head further including having a blade holding member;

a said circular blade being retained in by said blade holding member;

an advancing device piston mounted in said blade head housing for moving the circular blade from a ready position into a cutting position;

said a biasing component including a return spring and being mounted within said chamber, said biasing component having one end supported against said advancing piston and another end supported against a support structure within said chamber at an axial spacing from said advancing piston with the axial spacing between said advancing piston and said support structure within said chamber being such that said biasing component is in a ready position compression when said one end of said biasing component is supported against said advancing piston and said another end of said biasing component is supported against said support structure within said chamber; and

a pressing device for increasing the compression of said biasing component beyond said ready position compression of said biasing component by loading said biasing component toward said support structure within said chamber while said axial spacing between said advancing piston and said support structure within said chamber remains constant, whereupon said one end of said biasing component

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previously supported against said advancing piston is decoupled from and is no longer supported against said advancing piston.

37. (New) A blade holder according to claim 19, wherein said slide is a slide piston arranged in said blade head housing and loaded by said pneumatic drive.

38. (New) A blade holder according to claim 22, wherein said pneumatic drive is supported at an inner side of said blade head housing and is fastened to said slide piston, wherein said slide piston pretensions said advancing piston rod into the ready position of the circular blade.

39. (New) A blade holder according to claim 35, wherein said advancing piston is a diaphragm seated on said advancing piston rod, wherein said diaphragm rests in said chamber such that a circumference of said diaphragm seals against said blade head housing.

40. (New) A blade holder according to claim 24, wherein said diaphragm is embodied as a rolling diaphragm.

41. (New) A blade holder according to claim 39, and further comprising a pressure sensor positioned between said diaphragm and said circular blade and measuring a cutting force acting at the circular blade.

42. (New) A blade holder according to claim 41, wherein said pressure sensor is arranged between said diaphragm and a side of said chamber proximal to said actuating piston rod.

43. (New) A blade holder according to claim 41, further comprising a damping member positioned between said diaphragm and said blade holding member.

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44. (New) A blade holder according to claim 43, wherein said damping member is arranged between said diaphragm and a projection of said advancing piston rod.

45. (New) A blade holder according to claim 41, and further comprising a damping member arranged between said pressure sensor and said projection of said advancing piston rod.

46. (New) A blade holder according to claim 43, wherein said advancing piston rod has a longitudinal axis and is divided transversely to said longitudinal axis into rod sections, wherein said damping member is positioned between said rod sections.

47. (New) A blade holder according to claim 43, wherein said damping member is a shaped body comprised of elastic material.

48. (New) A blade holder according to claim 43, wherein said damping member is a spring.